

**MODUL PINTAS
TINGKATAN 5**

1449/2

**MATEMATIK
Kertas 2**

$2\frac{1}{2}$ jam

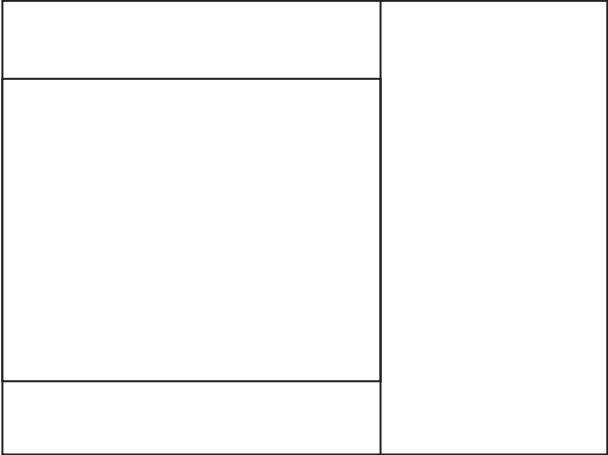
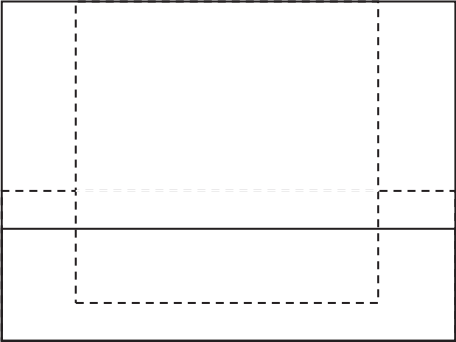
Dua jam tiga puluh minit

PERATURAN PEMARKAHAN MATEMATIK K2

1449/2

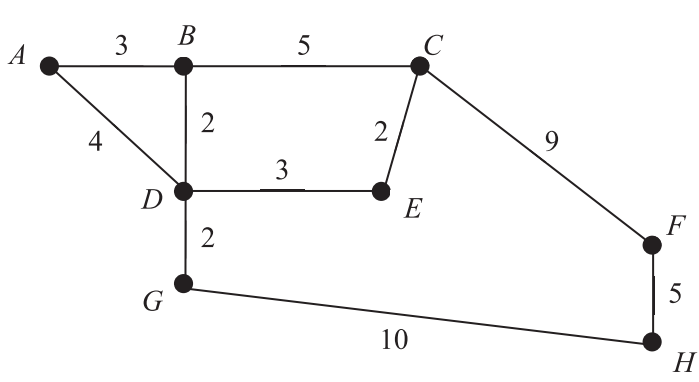
Soalan	Skema markah / Marking Scheme	Marks	
		Submarks	Total Marks
1	$x^2 - 25 = 0$ $(x - 5)(x + 5) = 0$ $x = 5, x = -5$ Lebar = 10 m <u>OR equivalent</u>	1 mark 1 mark 1 mark 1 mark	4 marks
2	$\sqrt{1.5^2 + 1^2}$ <i>or</i> $\sqrt{3.25}$ $2.8 - 2$ <i>or</i> 0.8 $\tan \theta = \frac{0.8}{\sqrt{3.25}}$ 23.93°	1 mark 1 mark 1 mark 1 mark	4 marks
3 (a)	$\frac{1.57}{2 \times 3.142}$ $0.249 - 0.25$	1 mark 1 mark	5 marks
(b)	$\frac{90}{360} \times \frac{22}{7} \times 7^2$ <i>or</i> $\frac{1}{2} \times 7 \times 7$ <u>or equivalent</u> $\frac{90}{360} \times \frac{22}{7} \times 7^2 - \frac{1}{2} \times 7 \times 7$ <u>or equivalent</u> 14 <u>NOTE:</u> 1. Accept π for marks. 2. Correct answer from incomplete working award 2 marks.	1 mark 1 mark 1 mark	
4 (a)	(i) Palsu (ii) Benar	1 mark 1 mark	4 marks
(b)	9 boleh dibahagi tepat dengan nombor itu sendiri, 3 dan 1 sahaja	1 mark	
(c)	Jika $p = 4$, maka $p + 3 = 7$	1 mark	

Soalan	Skema markah / Marking Scheme	Marks	
		Submarks	Total Marks
8	$T = (-6 \times 10^{-3})x + 28 \text{ or equivalent}$ <p style="text-align: center;">×</p> <p>$T(^{\circ}\text{C})$</p> <p style="text-align: right;">0 1 000 2 000 3 000 4 000 5 000 $x \text{ (m)}$</p>	1 mark	4 marks
		3 marks	
9	<p>(a) $m = \frac{1}{6}$</p> <p>(b) $m = \frac{4}{3}$</p> <p>$2 = \left(\frac{4}{3}\right)(3) + C \text{ OR } \frac{y-2}{x-3} = \left(\frac{4}{3}\right) \text{ or equivalent}$</p> <p>$y = \frac{4}{3}x - 2 \text{ or equivalent}$</p>	1 mark	4 marks
		1 mark	
		1 mark	
		1 mark	
10	<p>(a) RM366 400</p> <p>(b) RM39 500</p> <p>(c) Tidak Encik Azwan dan Puan Marina hanya akan menerima pampasan maksimum RM360 900</p> <p><u>or</u> equivalent</p>	1 mark	4 marks
		1 mark	
		1 mark	
		1 mark	

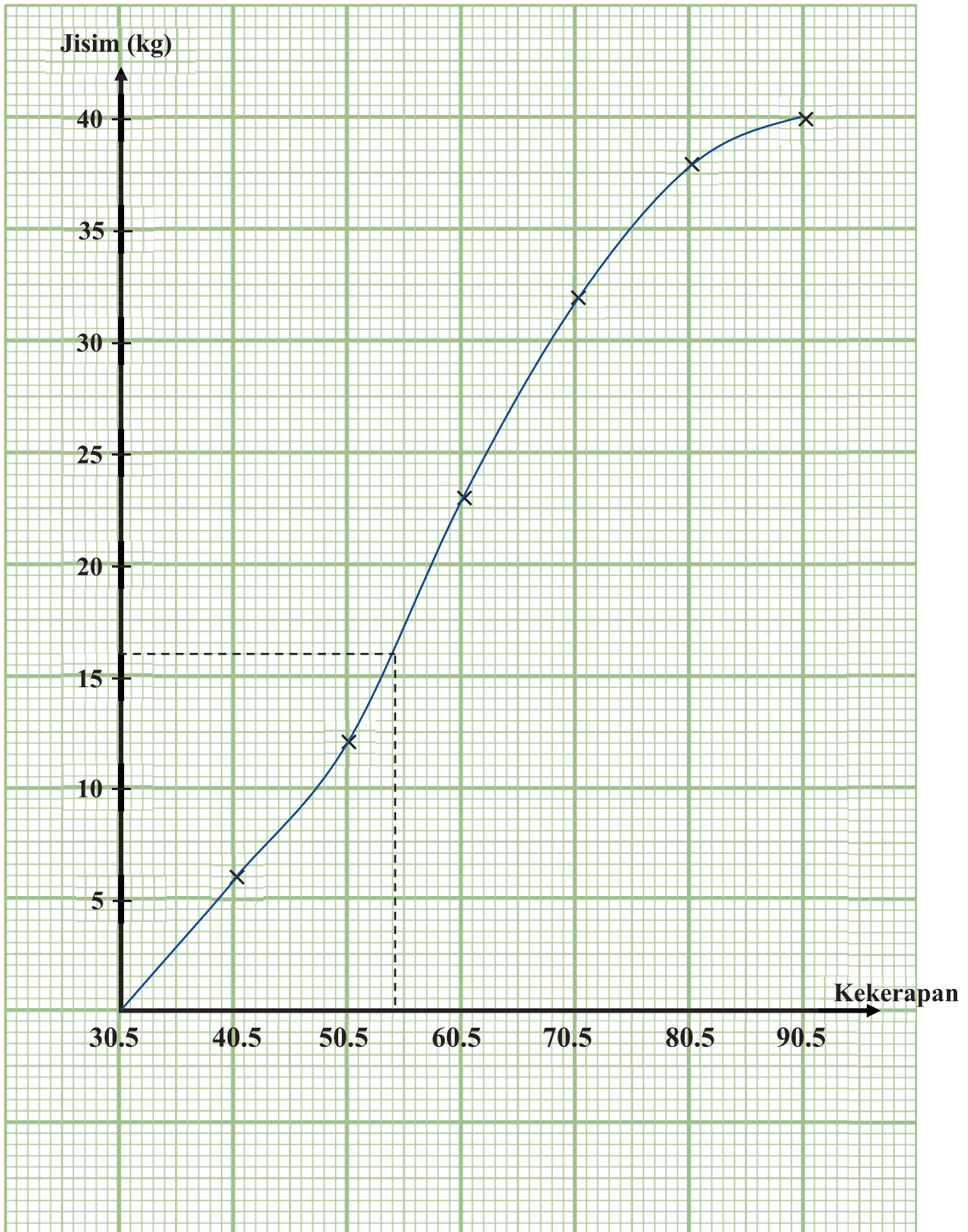
Soalan	Skema markah / Marking Scheme	Marks	
		Submarks	Total Marks
11 (a)		4 marks	9 marks
(b)		5 marks	
12 (a)	$\frac{18-15}{0-8} \text{ or equivalent}$ $-\frac{3}{8} \text{ or equivalent}$ <p><u>Note:</u> 1. Accept correct answer without working for 2 marks.</p>	2 marks 1 mark	7 marks
(b)	$\frac{1}{2} \times (15+18) \times 8 \text{ or equivalent}$ $\frac{1}{2} \times (t-8) \times 15 \text{ or equivalent}$ $\frac{1}{2} \times (15+18) \times 8 = \frac{1}{2} \times (t-8) \times 15 \text{ or equivalent}$ <p>25.6</p>	1 mark 1 mark 1 mark 1 mark	

Soalan	Skema markah / Marking Scheme	Marks																																																																									
		Submarks	Total Marks																																																																								
13 (a)	<table><tr><td>Batang</td><td colspan="8">Daun</td></tr><tr><td>9</td><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td>0</td><td>2</td><td>4</td><td>5</td><td>5</td><td>6</td><td>8</td><td></td></tr><tr><td>7</td><td>0</td><td>1</td><td>2</td><td>4</td><td>4</td><td>5</td><td>6</td><td>9</td></tr><tr><td>6</td><td>2</td><td>7</td><td>7</td><td>8</td><td>8</td><td>8</td><td>9</td><td>9</td></tr><tr><td>5</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td>2</td><td>6</td><td>9</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td>5</td><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> <div>3 5 bermaksud 35 kg</div>	Batang	Daun								9	5								8	0	2	4	5	5	6	8		7	0	1	2	4	4	5	6	9	6	2	7	7	8	8	8	9	9	5	0								4	2	6	9						3	5	8							4 marks	10 marks
Batang	Daun																																																																										
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3	5	8																																																																									
(b)	<p>(i)</p> <table><tr><th>Jisim (kg) <i>Mass (kg)</i></th><th>Kekerapan <i>Frequency</i></th><th>Kekerapan Longgokan <i>Cumulative frequency</i></th><th>Sempadan Atas <i>Upper Boundary</i></th></tr><tr><td>21 – 30</td><td>0</td><td>0</td><td>30.5</td></tr><tr><td>31 – 40</td><td>6</td><td>6</td><td>40.5</td></tr><tr><td>41 – 50</td><td>6</td><td>12</td><td>50.5</td></tr><tr><td>51 – 60</td><td>11</td><td>23</td><td>60.5</td></tr><tr><td>61 – 70</td><td>9</td><td>32</td><td>70.5</td></tr><tr><td>71 – 80</td><td>6</td><td>38</td><td>80.5</td></tr><tr><td>81 – 90</td><td>2</td><td>40</td><td>90.5</td></tr></table> <p>(ii) Rujuk Ogif</p> <p>(iii) 54.5</p>	Jisim (kg) <i>Mass (kg)</i>	Kekerapan <i>Frequency</i>	Kekerapan Longgokan <i>Cumulative frequency</i>	Sempadan Atas <i>Upper Boundary</i>	21 – 30	0	0	30.5	31 – 40	6	6	40.5	41 – 50	6	12	50.5	51 – 60	11	23	60.5	61 – 70	9	32	70.5	71 – 80	6	38	80.5	81 – 90	2	40	90.5	1 mark 4 marks 1 mark																																									
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14 (a)	$T \propto \frac{1}{x} \quad \text{atau} \quad 6 = \frac{k}{3}$ $T = \frac{18}{x}$	1 mark 1 mark	8 marks																																																																								
(b)	<table><tr><td><i>x</i></td><td>1</td><td>2</td><td>3</td><td>5</td><td>6</td><td>8</td></tr><tr><td><i>T</i></td><td>18</td><td>9</td><td>6</td><td>3.6</td><td>3</td><td>2.25</td></tr></table>	<i>x</i>		1	2	3	5	6	8	<i>T</i>	18	9	6	3.6	3	2.25	1 mark																																																										
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(c)	<p><u>Graph</u></p> <p>Axes are drawn in the correct direction, uniform scale for $0 \leq x \leq 8$ and $0 \leq y \leq 18$.</p> <p>5 points and 1 point* plotted accurately</p> <p>Smooth and continuous curve without straight line(s) and passes through all the 6 correct points $0 \leq x \leq 8$ and $0 \leq y \leq 18$.</p> <p><u>Notes</u> : (1) 5 points plotted correctly award 1 mark (2) Other scale being used, subtract 1 mark</p>	1 mark 2 marks 1 mark																																																																									
(d)	4	1 mark																																																																									

Soalan	Skema markah / Marking Scheme	Marks	
		Submarks	Total Marks
16 (a)	(i) $2x + x = 35 - 10 - 4 - 3 - 7 - 2$ $x = 3$ $7 + 3 + 2 + 6$ 18 (ii) $4 + 2 + 7$ atau 13	1 mark 1 mark 1 mark 1 mark 1 mark	
(b)	(i) $42x + 30y = 291$ atau $54x + 36y = 360$ (ii) $\begin{pmatrix} 42 & 30 \\ 54 & 36 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} 291 \\ 360 \end{pmatrix}$ $\begin{pmatrix} x \\ y \end{pmatrix} = \frac{1}{42(36) - 30(54)} \begin{pmatrix} 36 & -30 \\ -54 & 42 \end{pmatrix} \begin{pmatrix} 291 \\ 360 \end{pmatrix}$ $x = 3$ $y = 5.5$	1 mark 1 mark 1 mark 1 mark 1 mark 1 mark	15 marks
(c)	$[93 \times 200] - [120 \times 40] - [\frac{1}{2} \times 40 \times 93]$ $11\ 940$	3 marks 1 mark	

Soalan	Skema markah / Marking Scheme	Marks	
		Submarks	Total Marks
17 (a)	(i) $152\,000 \times \frac{90}{100}$ <u>or</u> 136 800 <u>or</u> equivalent	1 mark	15 marks
	$136\,800 + 136\,800 \times \frac{2.1}{100} \times 7$ <u>or</u> equivalent	1 mark	
	156 909.60	1 mark	
	(ii) $\frac{156\,909.60}{7 \times 12}$ <u>or</u> $\frac{190\,304}{9 \times 12}$ <u>or</u> equivalent	1 mark	
	Bank Suci : 1 867.97	1 mark	
	Bank Murni : 1 762.07	1 mark	
	(b) (i) Jabatan Pengangkutan Jalan/ JPJ	1 mark	
	(ii) 280	1 mark	
	(iii) $280 + (1998 - 1800) \times 0.50$ <u>or</u> equivalent	1 mark	
	379	1 mark	
(c) (i)	 <p><u>Note:</u> Accept any orientation of graph with correct vertices and edges. All vertices and edges correctly drawn without weightage, award P1 Accept 2 mistakes of vertices and/or edges for P1</p>	2 marks	
	(ii) $A \rightarrow B \rightarrow D \rightarrow E \rightarrow D \rightarrow G \rightarrow H$	1 mark	
	23	1 mark	
	(iii) 20	1 mark	

Graf untuk Soalan 13 (b)(ii)
Graph for Question 13 (b)(ii)



Graf untuk Soalan 14 (c)
Graph for Question 14 (c)

